

Please add Claims 96-185 as follows:

Sub F4

--96.  $C_{70}$  in macroscopic amounts.

97. The  $C_{60}$  of Claim 86 wherein the  $C_{60}$  is present in amounts that are capable of being detected by IR.

98. The  $C_{60}$  of Claim 86 wherein the  $C_{60}$  is present in amounts that are capable of being detected by UV absorption.

99. The  $C_{60}$  of Claim 86 wherein the  $C_{60}$  is present in amounts sufficient to obtain an X-ray diffraction pattern thereof.

100. The  $C_{70}$  of Claim 96 in which the  $C_{70}$  is present in amounts that are capable of being detected by UV.

101. The  $C_{70}$  of Claim 96 in which the  $C_{70}$  is present in amounts that are capable of being detected by IR.

Sub F5

102. Macroscopic amounts of substantially pure  $C_{60}$ .

103. Macroscopic amounts of substantially pure  $C_{70}$ .

104. A formed or molded product comprising  $C_{70}$ , said  $C_{70}$  being present in macroscopic amounts.

105. A free flowing particulate comprising  $C_{70}$ , said  $C_{70}$  being present in macroscopic amounts.

106. A formed or molded product comprising  $C_{60}$ , said  $C_{60}$  being present in macroscopic amounts.

107. A free flowing particulate comprised of  $C_{60}$ , said  $C_{60}$  being present in macroscopic amounts.

108. The solid carbon product of Claim 53, wherein the recovered  $C_{60}$  molecules in said solid are in macroscopic amounts.

Sub F6

109. The solid carbon product of Claim 53 wherein recovered  $C_{60}$  in said solid carbon products are in amounts that are capable of being detected by IR.

110. The solid carbon product of Claim 53 wherein the recovered  $C_{60}$  in said solid carbon products are in amounts that are capable of being detected by UV.

111. A solid comprising  $C_{60}$ , said  $C_{60}$  being present in macroscopic amounts.

112. A solid comprising  $C_{70}$ , said  $C_{70}$  being present in macroscopic amounts.

113. A sooty product comprising  $C_{60}$ , the  $C_{60}$  in said sooty product being present in sufficient concentration to allow macroscopic amounts of said  $C_{60}$  to be separated therefrom.

114. A sooty product comprising  $C_{70}$ , the  $C_{70}$  in said sooty product being present in sufficient concentrations to allow macroscopic amounts of said  $C_{70}$  to be separated therefrom.

115. The sooty product of Claim 113, in which the  $C_{60}$  is present in amounts that are capable of being detected by IR.

116. The sooty product of Claim 114 in which the  $C_{70}$  is present in amounts that are capable of being detected by IR.

117. The sooty product of Claim 113 in which the  $C_{60}$  is present in amounts that are capable of being detected by UV.

118. The sooty product of Claim 114 in which the  $C_{70}$  is present in amounts that are capable of being detected by UV.

119. A sooty carbon product prepared by the process comprising:

(a) vaporizing a carbon source in the presence of an inert gas to provide a vapor of carbon atoms,

BPF6

(b) quenching said vapor of carbon in said inert gas under conditions effective to nucleate and condense said vapor of carbon atoms into a sooty carbon product comprising  $C_{60}$  molecules, said  $C_{60}$  molecules being present in said sooty carbon in sufficient concentrations to allow macroscopic amounts of  $C_{60}$  to be separated from said soot.

120. The sooty carbon product of Claim 119 in which the  $C_{60}$  is present in amounts that are capable of being detected by IR.

121. The sooty carbon product of Claim 119 in which the  $C_{60}$  is present in amounts that are capable of being detected by UV.

122. The sooty carbon product of Claim 113, additionally comprising  $C_{70}$ .

123. The sooty carbon product of Claim 119 additionally comprising  $C_{70}$ .

124. The sooty carbon product of Claim 119 in which the carbon source subject to vaporization in step (a) is graphite or amorphous or glassy carbon.

125. The sooty carbon product of Claim 119 in which the carbon source subject to vaporization in step (a) is graphite.

126. The sooty carbon product of Claim 119 in which the carbon source subject to vaporization in step (a) is graphite rods.

127. The sooty carbon product of Claim 119 in which the carbon source in step (a) is vaporized in an evacuated reactor.

128. The sooty carbon product of Claim 119 in which the carbon source in step (a) is vaporized in an evacuated bell jar.

129. The sooty carbon product of Claim 119 in which the inert gas is a noble gas.

130. The sooty carbon product of Claim 129 in which the noble gas is helium or argon.

131. The sooty carbon product of Claim 119 in which the process is conducted at a pressure sufficient to nucleate said carbon vapor.

132. The sooty carbon product of Claim 131 in which the pressure ranges from 60 torr to 400 torr.

133. The  $C_{60}$  of Claim 86 in which the  $C_{60}$  is present in amounts sufficient to take a micrograph.

134. The solid  $C_{60}$  of Claim 111 in which the  $C_{60}$  is present in amounts sufficient to take a micrograph.

135. The  $C_{60}$  of Claim 102 in which the  $C_{60}$  is present in amounts capable of being detected by IR.

136. The  $C_{60}$  of Claim 102 in which the  $C_{60}$  is present in amounts capable of being detected by UV.

137. The  $C_{60}$  of Claim 102 in which the  $C_{60}$  is present in amounts sufficient to obtain an X-ray diffraction pattern thereof.

138. The  $C_{60}$  of Claim 102 in which the  $C_{60}$  is present in amounts sufficient to take a micrograph.

139. The  $C_{70}$  of Claim 103 in which the  $C_{70}$  is present in amounts capable of being detected by UV.

140. The  $C_{70}$  of Claim 103 in which the  $C_{70}$  is present in amounts capable of being detected by IR.

141. A solid carbon product prepared by the process comprising:

(a) evaporating a carbon source in the presence of an inert quenching gas under conditions effective to produce a sooty carbon product containing  $C_{60}$ , said  $C_{60}$  being present in said sooty carbon product in sufficient concentration to allow

a macroscopic amount of said  $C_{60}$  to be separated from said sooty product;

(b) collecting the sooty carbon product produced therefrom;

(c) subliming the carbon product comprising  $C_{60}$  from the sooty carbon product; and

(d) condensing the sublimed carbon product comprising  $C_{60}$ .

142. The solid carbon product of Claim 141 wherein the sublimation occurs at a temperature ranging from 300°-400°C.

143. The solid carbon product of Claim 142 wherein step (c) comprises heating the carbon product comprising  $C_{60}$  in a vacuum or inert atmosphere at effective sublimation temperatures to extract the carbon product comprising  $C_{60}$  from said sooty carbon product.

144. The solid carbon product of Claim 141 in which the carbon source in step (a) is vaporized in an evacuated reactor.

145. The solid carbon product of Claim 144 in which the carbon in step (a) is vaporized in an evacuated bell jar.

146. The solid carbon product of Claim 141 in which the carbon subject to vaporization in step (a) is graphite.

147. The solid carbon product of Claim 141 in which the carbon subject to vaporization in step (a) is graphite rods.

148. The solid carbon product of Claim 141 wherein the carbon source in step (a) is vaporized by passing an electric current of sufficient intensity to produce a sooty carbon product.

149. The solid carbon product of Claim 148 wherein the electrical current is about 100 amps.

150. The solid carbon product of Claim 141 wherein the inert quenching gas of step (a) is a noble gas.

151. The solid carbon product of Claim 141 wherein the carbon source in step (a) is vaporized at a pressure ranging from 50 torr to 400 torr.

152. The solid carbon product of Claim 151 wherein the carbon source is vaporized in step (a) at approximately 100 torr.

153. The solid carbon product of Claim 53 wherein the collecting substrate in step (b) is a glass surface.

154. The solid carbon product of Claim 150 wherein the noble gas is helium or argon.

155. The solid carbon product of Claim 141 wherein  $C_{70}$  is additionally present.

SUB P8  
2

156. The solid carbon product of Claim 155 wherein  $C_{70}$  is separated from  $C_{60}$  by sublimation, fractionally, crystallization, column chromatography, fractional crystallization, column chromatography, capillary electrophoresis, HPLC, preparative thin layer chromatography, crystallization, or extraction.

157. The solid carbon product of Claim 155 wherein the  $C_{70}$  is separated from  $C_{60}$  by sublimation.

VB P9

158. The solid carbon product of Claim 141 wherein the  $C_{60}$  is present in amounts capable of being detected by IR.

159. The solid carbon product of Claim 141 wherein the  $C_{60}$  is present in amounts capable of being detected by UV.

160. The solid carbon product of Claim 141 wherein the  $C_{60}$  is present in amounts sufficient to obtain an X-ray diffraction pattern thereof.

161. The solid carbon product according to Claim 141 in which the  $C_{60}$  is present in amounts sufficient to take a micrograph.

29  
162. The solid carbon product according to Claim 155 wherein the  $C_{70}$  is present in macroscopic amounts.

163. The solid carbon product according to Claim 162 wherein the  $C_{70}$  is present in amounts that are capable of being detected by UV.

164. The solid carbon product according to Claim 162 wherein the  $C_{70}$  is present in amounts that are capable of being detected by IR.

165. A solid comprising macroscopic amounts of crystalline  $C_{60}$ .

166. A solid comprising macroscopic amounts of crystalline  $C_{70}$ .

167. A carbon product comprising macroscopic amounts of solid  $C_{60}$ .

168. A carbon product comprising macroscopic amounts of solid  $C_{70}$ .

169. The carbon product of Claim 167 wherein the solid  $C_{60}$  is crystalline  $C_{60}$ .

170. The carbon product of Claim 168 wherein the solid  $C_{70}$  is crystalline  $C_{70}$ .

171. The solid according to Claim 111 wherein  $C_{60}$  is present in amounts that are capable of being detected by IR.

172. The solid according to Claim 111 wherein the  $C_{60}$  is present in amounts that are capable of being detected by UV.

173. The solid according to Claim 111 wherein the  $C_{60}$  is present in amounts sufficient to obtain X-ray diffraction pattern thereof.

174. The solid according to Claim 111 wherein the  $C_{70}$  is present in amounts that are capable of being detected by UV.